CHAPTER I
THE COMMISSION'S FINDINGS AND RECOMMENDATIONS

As part of an effort to modify the nation's policy on public works, the Congress in 1991 established the Commission to Promote Investment in America's Infrastructure. The commission's primary charge was to assess new means of encouraging investment, especially by pension funds, in public infrastructure. Specifically, the Congress directed it to "conduct a study on the feasibility and desirability of creating a type of infrastructure security to permit the investment of pension funds in funds used to design, plan, and construct infrastructure facilities in the United States. Such study may also include an examination of other methods of encouraging public and private investment in infrastructure facilities."[1]

After hearing testimony and receiving information from a Member of Congress, executive branch agencies, state and local officials, and the private sector, the commission reported its conclusions and recommendations in February 1993.[2] It argued that there is a significant gap between current spending on infrastructure and the nation's needs and that this gap is likely to widen in the future.[3] (For example, the commission cited estimates that highway spending would have to double to meet highway construction needs.) It also found that traditional means of financing investment in infrastructure were inadequate to fund current and future national needs. The commission concluded that the federal government would have to take the lead in developing new means of financing infrastructure, especially the growing proportion of projects that are ultimately financed with user fees and other dedicated sources of revenues.

The commission recommended that the Congress create two new corporations to provide credit assistance that would encourage states and localities to issue debt for investing in transportation and environmental projects financed with user charges. The corporations could also support investment in other forms of infrastructure. A National Infrastructure Corporation (NIC)

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1. Section 1081 of the Intermodal Surface Transportation Efficiency Act of 1991 (105 Stat. 2020).

2. Commission to Promote Investment in America's Infrastructure, *Financing the Future: Report of the Commission to Promote Investment in America's Infrastructure* (February 1993). All subsequent quotations in this paper are taken from that report.

3. The term "infrastructure" can be defined broadly to include any long-lived assets that produce benefits. The commission focused more narrowly on publicly owned physical infrastructure, especially transportation and environmental projects financed with user fees or special taxes. Physical public infrastructure includes highways, bridges, and tunnels; mass transit, intercity rail, and airports; waterways, docks, and wharves; water, sewer, and wastewater systems; and solid and hazardous waste disposal facilities.

would purchase and bear the credit risk of municipal bonds issued by states and localities to provide long-term financing for infrastructure projects; it would also insure private firms against a portion of the risk of developing new facilities. An Infrastructure Insurance Company (IIC), which would initially be a subsidiary of the NIC, would insure infrastructure bonds issued to provide long-term financing for new projects. The commission also recommended that the Congress consider changes in federal law that would offer expanded tax subsidies to encourage municipal investment in infrastructure.

PROJECTED INADEQUACY OF MUNICIPAL INVESTMENT

In support of its recommendations, the commission argued that the federal and state and local governments will not build the infrastructure that the nation needs for the future. That view reflects previous studies that found a large gap between the current level of investment in new infrastructure projects and the nation's needs and concluded that closing that gap with new spending would make the nation better off. The commission identified several factors that would make public investment inadequate, including resource constraints that limit government spending and tax subsidies, limitations of current financing arrangements, and lack of support from citizens and state and local officials.

Resource Constraints

According to the commission, budgetary pressures have prevented and will continue to prevent states and localities and the federal government from increasing either expenditures or tax subsidies by enough to eliminate the shortfall in the nation's investment in infrastructure. All levels of government face constraints on the amount of taxes they can collect. Given those constraints, spending on health care and social services, income maintenance, education, and public safety is limiting the amount of resources that can be devoted to infrastructure. Furthermore, the legal limits on federal tax subsidies for municipal bonds issued to finance projects that involve private-sector participation, which are described in Box 1, increase the cost of financing such projects. The commission found that these restrictions greatly limit the supply of low-cost credit to municipalities.

Limitations of Current Financing Arrangements

The commission argued that three factors unnecessarily limit state and local governments in financing infrastructure with debt. First, the private municipal bond insurance industry is highly concentrated and risk averse, and the commission took the view that the industry does not insure enough higher-risk debt. Second, there is a relative lack of investment by pension funds in debt issued to finance infrastructure facilities. Private pension funds and state and local government retirement funds on average invest only 0.1 percent of their portfolios in tax-exempt municipal bonds and hold only 0.2 percent of outstanding municipal debt (see Table 1 and Table 3 on pages 4 and 24). Pension and retirement funds invest only small amounts in municipal bonds because they do not need the tax advantage that the bonds offer--income on all of their investments is exempt from federal taxation, and taxable bonds pay higher interest rates than tax-exempt debt. Consistent with its statutory mandate,

BOX 1.
CURRENT LIMITS ON TAX-EXEMPT FINANCING FOR INFRASTRUCTURE

Municipalities value the ability to issue tax-exempt bonds because investors are willing to accept a lower interest rate than the rate that is paid on taxable debt. But federal law, which was substantially tightened by the Tax Reform Act of 1986, restricts the issuance of tax-exempt debt for financing infrastructure that is used, at least in part, for private activities. It also restricts municipalities from issuing tax-exempt debt that directly or indirectly finances loans to entities that are not exempt from taxation.

Under federal law, a municipal bond finances private activities if private businesses or individuals use more than 10 percent of the facility and service more than 10 percent of the debt. Public airports, docks and wharves, solid waste disposal plants, and facilities for nonprofit organizations are exempt from the definition of private activity; bonds that finance such facilities are tax-exempt. The law also caps the volume of tax-exempt, private-activity bonds issued in a state at no more than $150 million or $50 per capita. Each state's governor distributes his or her state's allocation among local jurisdictions.

TABLE 1. FINANCIAL HOLDINGS OF PRIVATE PENSION PLANS AND STATE AND LOCAL GOVERNMENT EMPLOYEE RETIREMENT FUNDS

Assets	1980	1985	1990	1991	1992	1993[a]
			In Billions of Dollars			
Agency Debt	37.4	114.9	179.4	195.8	212.3	220.8
Checkable Deposits and Cash	4.8	6.4	9.7	8.9	11.4	12.3
Corporate and Foreign Bonds	169.9	272.5	382.6	426.0	444.5	460.1
Corporate Equities	267.8	584.5	953.7	1,275.1	1,431.3	1,503.9
Miscellaneous	84.6	141.3	136.1	175.2	190.4	197.8
Money Market and Mutual Fund Shares	9.7	19.9	63.2	83.2	91.0	93.8
Mortgages	14.5	27.8	39.9	48.7	48.1	48.2
Open-Market Paper	19.5	19.9	47.2	50.2	48.3	51.1
Tax-Exempt Securities	4.1	2.6	2.1	2.4	2.6	2.8
Time Deposits	35.6	103.3	189.7	240.7	259.5	270.9
Treasury Securities	53.1	198.2	362.1	408.9	447.3	470.8
Total	701.0	1,491.3	2,365.7	2,915.1	3,186.7	3,332.5
			In Percent			
Agency Debt	5.3	7.7	7.6	6.7	6.7	6.6
Checkable Deposits and Cash	0.7	0.4	0.4	0.3	0.4	0.4
Corporate and Foreign Bonds	24.2	18.3	16.2	14.6	13.9	13.8
Corporate Equities	38.2	39.2	40.3	43.7	44.9	45.1
Miscellaneous	12.1	9.5	5.8	6.0	6.0	5.9
Money Market and Mutual Fund Shares	1.4	1.3	2.7	2.9	2.9	2.8
Mortgages	2.1	1.9	1.7	1.7	1.5	1.4
Open-Market Paper	2.8	1.3	2.0	1.7	1.5	1.5
Tax-Exempt Securities	0.6	0.2	0.1	0.1	0.1	0.1
Time Deposits	5.1	6.9	8.0	8.3	8.1	8.1
Treasury Securities	7.6	13.3	15.3	14.0	14.0	14.1

SOURCE: Congressional Budget Office based on Federal Reserve Board, "Flow of Funds Accounts, Second Quarter 1993, Annual Revision" (1993).

a. The figures in this column represent holdings at the end of the second quarter of 1993.

the commission argued that facilitating investment in infrastructure by pension funds should be an important objective of federal policy.

Third, the commission contended that the private sector is unwilling to bear the risks of developing and financing some infrastructure projects, especially new facilities, in part because it has difficulty putting a price on those risks. For example, the commission found that private firms are often unwilling to invest money to pay the costs associated with developing new projects where there is a risk that the facilities may never be built. It noted that states and localities are financing an increasing proportion of infrastructure projects with user fees or other dedicated revenue sources and asserted that many such projects could be self-sustaining in the long run and would have significant public benefits. The commission concluded, however, that jurisdictions might not be able to purchase insurance for bonds to finance new projects that lacked a track record or involved complex user fees, and that they might not be able to sell the debt without bond insurance. It also asserted that investors needed to improve their ability to assess the creditworthiness of such projects.

Lack of Support from Citizens and Elected Officials

The commission also concluded that local residents and elected officials are often reluctant to support revenue-raising measures, such as certain user fees, that could make new infrastructure projects self-sustaining and encourage the private sector to bear the risks of developing and financing them. It asserted that jurisdictions that could issue tax-exempt bonds often avoid the difficult task of gaining citizen approval for revenue-producing measures to pay for investment in infrastructure.

THE ACTIVITIES OF THE NIC AND THE IIC

The commission proposed that the government establish and capitalize a National Infrastructure Corporation to provide three forms of credit assistance to state and local governments seeking to finance infrastructure projects. First, the NIC would purchase a portion of the debt issued to provide the long-term financing for new projects. The payments on the bonds would be legally subordinated to (not due before) payments on the remainder of the debt sold to finance the projects. (By subordinating some bonds to the remaining, so-called senior portion of a debt offering, the issuer reduces the credit risk of the senior bonds.) Second, the corporation would insure private firms against a portion of the risk associated with developing new facilities. Third, the Infrastructure

Insurance Company would insure senior infrastructure bonds and reinsure--bear a portion of the credit risk of--such bonds that other firms had insured.

In addition to these forms of credit assistance, which are discussed in detail below, in the long run the NIC would purchase senior bonds and bear the credit risk on those that did not carry bond insurance. The corporation would also provide technical assistance to help state and local governments borrow to finance infrastructure investment. For example, the NIC could help issuers produce financial and engineering studies that would help investors evaluate the risk of projects more accurately.

Purchasing Subordinated Infrastructure Bonds

The NIC would purchase subordinated infrastructure bonds sold by state and local governments to provide long-term financing of projects that could not be financed solely with senior debt sold to the public. The commission concluded that senior debt financing may not be feasible when projects "lack historical operating results or . . . may not be able to demonstrate sufficient credit strength immediately." Depending on the nature of the projects, the subordinated bonds would pay either taxable or tax-exempt interest.

By issuing subordinated bonds to the NIC, a municipality would reduce the credit risk of the senior bonds that it issued to provide the balance of funding for the same infrastructure project. The subordinated bonds would reduce the credit risk because the municipality would make payments on them only if the project's cash flows exceeded the payments on the senior debt. The greater the risk of the project, the larger the proportion of the total debt that the issuer would have to subordinate in order to make the senior debt eligible for bond insurance or to make it attractive to investors without insurance.

The subordinated bonds purchased by the NIC typically would not be eligible for investment-grade credit ratings.[4] If the corporation concentrated on less risky projects, the subordinated bonds could be eligible for a credit rating of double B, the highest below-investment-grade rating. If the NIC focused on riskier projects, however, the bonds would be eligible only for lower credit

4. A credit rating is a measure of the risk of default of a debt security. Private credit rating agencies assign letter ratings to indicate the relative risk of rated obligations. Ratings range from triple A, the highest, to single C, the lowest. The agencies provide a general description of the differences in the default risk of securities that receive different ratings. For example, obligations rated double A are usually described as having a very strong capacity to pay interest and principal and differ from the highest-rated issues only to a small degree. Triple A, double A, single A, and triple B are the investment-grade ratings. Bonds rated double B, single B, triple C, double C, or single C are below investment grade. Debt securities issued by private corporations that receive below-investment-grade ratings are often referred to as junk bonds.

ratings, and the corporation's exposure to credit risk would be greater. In any event, the corporation would bear the majority of the credit risk of the debt issued to finance the facilities.

Insuring Private Firms Against Project Development Risk

The NIC would provide "developmental insurance" that would "cover the initial development phase of projects [for which] . . . financial feasibility and regulatory approvals pose specific risks." Environmental lawsuits, voter disapproval of the issuance of bonds to provide long-term financing, or changes in the economy or in government policy may prevent jurisdictions from going forward with infrastructure projects. According to the commission, that uncertainty may deter developers in some cases from providing the engineering, environmental, legal, and preconstruction planning services that are needed to develop projects. The corporation would induce developers to provide such services by insuring up to 70 percent of the costs of project development.

The NIC's development insurance would be a kind of financial guarantee of the money that construction firms spent to develop targeted infrastructure projects. The corporation would be legally obligated to cover up to 70 percent of any losses that developers incurred if projects were never completed. The commission assumed that the NIC would establish loss reserves equal to 100 percent of the development risk insurance it provided.

Bearing the Credit Risk on Senior Infrastructure Bonds

The Infrastructure Insurance Company would insure and reinsure senior municipal bonds issued to finance state and local infrastructure projects. The commission proposed that the IIC operate under two restrictions. First, the company would be allowed to insure or reinsure only infrastructure bonds that existing, private municipal bond insurers would not insure or that could not obtain other forms of credit enhancement such as a bank letter of credit. Second, the IIC would not be allowed to insure the most creditworthy infrastructure debt. Specifically, the company could not insure bonds that were eligible for a credit rating higher than triple B, which is the lowest investment-grade rating. The commission assumed that the IIC would insure some bonds that were not eligible for investment-grade credit ratings.

The commission's report also proposed that, in the long run, the NIC purchase senior infrastructure bonds, including bonds insured by the IIC. If the senior debt carried bond insurance provided by other firms in the industry, the

NIC would incur negligible credit risk. If the bonds were uninsured, the corporation's exposure to credit risk would be comparable to the IIC's.

FINANCING AND ORGANIZING THE CORPORATIONS

The commission's report distinguished two phases in financing the NIC and the IIC. In the first phase, federal grant funds would provide capital for the corporations, which would use the money to induce the private sector to invest a large amount of additional funds in new infrastructure projects. In the second phase, the NIC would obtain funds by borrowing from the public; the IIC would sell stock to private investors. The commission was unclear about the legal and organizational status of the NIC but appeared to propose that it be established as an off-budget, federally chartered corporation. The commission also proposed that the IIC be organized as a state-chartered municipal bond insurer. Initially, the IIC would be wholly owned by the NIC, but eventually it would be owned by private investors.

Financing the NIC and the IIC

Initially, the federal government would capitalize the NIC and the IIC through grants. The commission's report mentioned the possibility of the government's providing $1 billion a year for five years. It noted several potential sources for this money, including the unobligated balances of existing federal agencies, new appropriations made directly to the NIC, or a change in law that would dedicate part of the revenues from the federal gasoline tax to the corporations.

The commission's report discussed how the corporations would use the federal grant money during this first phase. The NIC would use 65 percent of the funds to purchase subordinated infrastructure bonds and 25 percent to capitalize the IIC. It would use another 10 percent of the federal grant money to establish reserves against losses from its development risk insurance. The commission estimated that if the government invested a total of $5 billion in the corporations, the initial round of credit assistance that they provided would support $50 billion of investment over five years to develop and finance new infrastructure projects. As municipalities paid off the subordinated bonds initially purchased by the NIC, the corporation would function as a revolving fund and make a second round of loans to finance additional projects. The commission stated that in the long run, a federal investment of $5 billion would have the potential of supporting up to $100 billion in new infrastructure projects.

In its second phase, the NIC would raise additional funds by issuing debt to the public and securitizing infrastructure bonds that it had purchased. (Securitization is the process of assembling pools of loan assets and issuing debt securities that entitle investors to portions of the income generated by the pools.)[5] During this phase, institutional and other public and private investors could purchase stock in the IIC. The commission's report suggested that this part of the corporation's life could begin after five years, when the subordinated bonds initially purchased by the NIC had developed a repayment history. The report noted that subordinated infrastructure bonds purchased by the corporation would be heterogeneous and pose significant credit risks, which would limit the market's willingness to purchase them and delay their securitization for some time. That observation would also apply to securitization of senior infrastructure bonds that the NIC purchased during this second phase.

Organizing the Corporations

The commission's report did not specify the legal and organizational status of the NIC. It appeared to propose that the corporation be established as an off-budget, federally chartered corporation. The commission did not examine the issue of who, if anyone, would own the NIC. During the second phase of its existence, the corporation would eventually need to raise additional capital to finance a growing volume of credit assistance to infrastructure borrowers. Private owners could be a source of such capital.

The commission noted that during the second phase, the NIC's ability to borrow "would benefit from a limited line of credit to the U.S. Treasury," but stated that it did not "foresee a need for a full faith and credit guarantee of the U.S. government." Those statements imply that the commission was aware of the option of organizing the NIC as a government-sponsored enterprise (GSE) during this phase. A GSE is a privately owned, federally chartered financial institution that has nationwide operations and specialized lending powers. The government has established several such enterprises to enable farmers, home buyers, mortgage lenders, and students to borrow more cheaply and efficiently.[6] All but one of the existing GSEs have a line of credit with the Treasury.

5. For an overview of the development of securitization in other credit markets, see Frank J. Fabozzi, Franco Modigliani, and Michael G. Ferri, *Foundations of Financial Markets and Institutions* (Englewood Cliffs, N.J.: Prentice-Hall, 1994), pp. 29-33 and 480-499.

6. For comprehensive discussions of GSEs as instruments of federal policy and of the five existing enterprises, see Thomas H. Stanton, *A State of Risk* (New York: HarperCollins, 1991); and Congressional Budget Office, *Controlling the Risks of Government-Sponsored Enterprises* (April 1991). For a previous analysis of the use of a GSE to provide federal subsidies for municipal infrastructure borrowing, see Congressional Budget Office, "Federal Infrastructure Subsidies: Grants or Credits?" CBO Paper (August 1990).

Investors infer from this and other special legal attributes of the enterprises that the federal government will not allow them to default on their obligations. An implied federal guarantee would enable the NIC to issue taxable debt at near-Treasury interest rates and would lead investors to pay higher prices for asset-backed securities that it issued than they would pay for identical securities issued by the most creditworthy private firms.[7]

The commission's report stated that the IIC "would be established initially as a subsidiary" of the NIC and would operate like the College Construction Loan Insurance Association (Connie Lee). Connie Lee is a private, for-profit municipal bond insurer that is restricted by federal law to insuring bonds for construction at institutions of higher learning and teaching hospitals.[8] The company is jointly owned by the Department of Education (14 percent); the Student Loan Marketing Association (Sallie Mae), which is a GSE (36 percent); and private investors (50 percent). The report also noted that the IIC would have to maintain the highest possible credit rating, triple A, in order to make its insurance attractive to state and local borrowers. The commission took the view that the company could maintain this rating on the strength of its underwriting criteria, management, investment policy, and premium income, without regard to its ties to the federal government.

PROPOSED REVISIONS IN FEDERAL TAX POLICY

The commission asked the Congress to consider various revisions in federal tax law that would encourage investment in municipal infrastructure by providing additional subsidies to jurisdictions that financed projects with debt. Several proposals would modify or repeal various federal restrictions on the use of tax-exempt bonds imposed by the Tax Reform Act of 1986. Another option would allow part or all of the investment earnings attributable to infrastructure securities to be distributed tax-free upon retirement to workers who participated in defined-contribution pension plans, including cash or deferred profit-sharing plans--often known as 401(k) plans--and to workers who invested in individual

7. In the decade ending in 1992, the interest rates on 10-year bonds issued by the existing GSEs averaged about 35 basis points more than the rates on bonds of comparable maturity. However, the 10-year Treasury bonds averaged 20 basis points less than the rates on triple-A-rated bonds, and about 65 basis points less than the rates on single-A-rated bonds issued by financial services firms. See Salomon Brothers, *Analytical Record of Yields and Yield Spreads* (New York: Salomon Brothers, July 1992 and updates), Part I, Table 2, and Part II, Table 9A.

8. See Department of the Treasury, *Report of the Secretary of the Treasury on Government-Sponsored Enterprises* (May 1990), Appendix G; College Construction Loan Insurance Association, *1992 Annual Report* (Washington, D.C.: College Construction Loan Insurance Association, 1992); and Standard & Poor's Corporation, "Connie Lee Insurance Co.," *Creditweek Municipal,* November 15, 1993.

retirement accounts (IRAs). The remainder of this paper refers collectively to these vehicles for saving for retirement as qualified pension plans.

Modifications of Current Restrictions on Tax-Exempt Financing

The commission encouraged the Congress to review and modify or repeal various federal restrictions on the use of tax-exempt bonds imposed by the Tax Reform Act of 1986. One option would exempt from federal taxation any debt issued to finance new environmental and transportation projects if "the benefits to the general public [were] substantial, notwithstanding private sector participation." A second option would allow municipalities to retain arbitrage profits (money earned by investing funds borrowed at tax-exempt rates in higher-yielding, generally taxable assets) to support infrastructure projects. A third option would narrow the definition of a private-purpose bond by increasing from 10 percent to 25 percent the proportion of the facilities financed with tax-exempt bonds that private businesses can use and the proportion of the debt service on such bonds that the businesses can pay. A fourth would allow banks to deduct the purchase price and carrying costs of tax-exempt infrastructure debt issued by jurisdictions that sell no more than $25 million of debt per year. (Current law allows the deduction if an issuer sells no more than $10 million of debt per year.)

New Tax Break for Participants in Qualified Pension Plans

The commission recommended that the Congress consider allowing part or all of the investment earnings attributable to "infrastructure securities" to be distributed tax-free upon retirement to workers who participated in qualified pension plans. The commission did not define infrastructure securities; nevertheless, it would be consistent with the panel's other proposals to interpret the term to refer broadly to any municipal bonds issued to finance defined categories of infrastructure, including bonds insured by the IIC, that would otherwise be taxable. If the term was defined to refer to debt obligations issued by the NIC in the second phase of its existence, the new tax break would reduce the corporation's borrowing costs substantially. Those savings would be in addition to the reduction in the NIC's borrowing costs that would arise from an implicit federal guarantee of its obligations, if it were a GSE.

Federal law already provides substantial tax subsidies for workers who participate in qualified pension plans (see Box 2), and the commission's proposal would create a further tax break for such workers. The workers would earn after-tax returns on infrastructure securities that were comparable to the

BOX 2
CURRENT FEDERAL TAX BREAKS FOR PENSIONS

Current federal law provides substantial tax preferences for contributions to and the investment earnings of private pension plans and individual retirement accounts (IRAs). The government does not tax employer contributions to qualified employer-sponsored pension plans--or some types of employee deferrals of wages--as compensation of the worker at the time the funds are deposited into the account. Limited amounts of an individual's contributions to an IRA are also tax-deductible. In addition, interest and other investment income earned within pension plans and IRAs accumulate tax-free until the investment income, along with the original contributions, is distributed after retirement. These policies thus shift the taxation of income from the time it is originally earned to the time it is withdrawn and used (when the worker's tax rate is generally lower). Federal revenue losses from these tax preferences are substantial, amounting to an estimated $65 billion in fiscal year 1994. Over $30 billion of these estimated losses is attributable to the favored tax treatment of qualified pension plans.

SOURCE: Congressional Budget Office, *Tax Policy for Pensions and Other Retirement Saving* (April 1987); Department of Labor, Pension and Welfare Benefits Administration, Office of Research and Economic Analysis, "Abstract of 1990 Form 5500 Annual Reports," *Private Pension Plan Bulletin*, no. 2, (Summer 1993), Table E7, p. 75; and Joint Committee on Taxation, *Estimates of Federal Tax Expenditures for Fiscal Years 1994-1998* (April 22, 1993), Table 1, p. 17.

returns they would earn on other taxable debt obligations, despite the fact that they accepted interest rates on the former that were lower than those on the latter, because part or all of the earnings on the infrastructure securities could be distributed tax-free.[9]

The new tax break for workers who participate in qualified pension plans would reduce the rates of interest that municipalities would have to pay on eligible infrastructure securities. The interest rates on the bonds would probably not be quite as low as those on comparable tax-exempt bonds, however, because only participants in qualified plans, rather than all potential investors, would benefit from the new tax break. The magnitude of the savings in borrowing costs for the municipalities would depend on several factors: the expected postretirement tax brackets of workers who participated in qualified plans; the aggregate assets of those plans, which currently exceed $2 trillion; and the

9. As an example, suppose that a worker saving through an IRA could earn 7 percent a year by investing in 30-year, triple-A-rated, taxable corporate debt securities. (The worker expects to be able to reinvest the interest income at 7 percent per year and to have a marginal federal income tax rate of 28 percent when he or she retires.) Suppose further that, as the commission proposed, upon retirement the worker could receive tax-free distributions of the earnings from triple-A-rated infrastructure securities held in the IRA. Under those conditions, the worker would be indifferent as to whether he or she invested in the 30-year corporate debt securities or in 30-year infrastructure securities that paid a taxable rate of interest of about 5 percent per year.

volume of eligible infrastructure securities. Rough calculations suggest that under current market and economic conditions, the proposal might reduce the interest rates on eligible infrastructure securities by 1.3 to 1.8 percentage points. In contrast, the yields on tax-exempt bonds have recently been about 2.3 percentage points less than the yields of fully taxable municipal bonds of equal maturity and credit risk.[10]

HOW THE COMMISSION'S PROPOSALS WOULD REDUCE BORROWING COSTS FOR MUNICIPAL INFRASTRUCTURE PROJECTS

The commission's proposals would increase municipal investment in infrastructure by reducing the costs of developing projects and financing them with debt. As Box 3 discusses, debt financing involves two costs: the cost of paying interest on bonds and the expenses associated with issuing them. The NIC would lower the interest rates paid by municipal infrastructure borrowers and the costs of developing projects by bearing the development and credit risks on subsidized terms. If the corporation was organized as a GSE in the second phase of its life, it would also be able to lower the issuance and interest costs of municipal infrastructure borrowers by financing the bonds it purchased with very low risk, highly liquid debt that carried an implicit federal guarantee. The changes in federal tax law advocated by the commission would provide subsidies that would also reduce the interest rates paid by infrastructure borrowers.

10. Since 1989, the yields on 30-year, triple-A-rated, tax-exempt general obligation bonds have averaged about 1.4 percentage points less than the yields on 30-year Treasury bonds. See Salomon Brothers, *Analytical Record of Yields*, Part I, Table 1, and Part III, Table 7. On a recent trading day, newly issued 30-year, triple-A-rated, taxable municipal bonds yielded about 0.9 percentage points more than 30-year Treasuries. The savings that the new tax break would offer an issuer of infrastructure bonds that would otherwise be fully taxable can be roughly estimated as follows. If all of the earnings attributable to infrastructure securities could be distributed tax-free to any investors, then the securities would yield interest rates equal to those on tax-exempt municipal bonds of equal maturity, liquidity, and credit risk. However, the commission's proposal would provide the new tax break only to participants in qualified pension plans, rather than to all investors. To attract this more limited universe of potential investors, the yields on infrastructure securities would have to be somewhat higher than those on comparable tax-exempt bonds. An investment banker who advised the commission speculates that the additional cost could be between one-half and one percentage point. That estimate and the figures above suggest that under current market and economic conditions, the proposal could reduce the yields on taxable infrastructure bonds by approximately 1.3 to 1.8 percentage points.

BOX 3.
COSTS OF DEBT FINANCING

States and localities that finance infrastructure projects with debt incur two costs. First, they purchase financial and other services to bring their debt securities to market. Second, they induce investors to purchase their bonds by paying interest rates that compensate the investors for the use of their money and the risks they bear.

Issuance Costs. To prepare to issue debt, municipal bond issuers may pay fees for the services of underwriters, bond counsels, rating agencies, financial and investment advisors, accountants, printers, advertisers, and paying agents. In general, those parties assist issuers by producing and disseminating information that enables investors to evaluate the risk of their debt. They also help issuers comply with federal and state laws and link them with investors.

Interest Costs. The interest rate that investors require a municipality to pay is set by the interaction in credit markets between two sets of parties: households, businesses, and others with money to lend, and the many types of public and private borrowers seeking funds. Just as prospective borrowers compete to attract funds, suppliers of loanable funds compete to finance investments with the highest after-tax, risk-adjusted returns. The high correlation between various rates of return suggests that investors view different types of financial assets (corporate debt and equity, Treasury and GSE debt, municipal bonds) as interchangeable. As a result, interest rates on municipal securities are affected by supply and demand in all sectors of the financial markets.

Interest rates compensate investors for bearing several types of risk. These include the risk that an issuer will default, leading to a loss of interest or principal (credit risk); the risk of an unexpected increase in interest rates, which would reduce the market value of a bond (interest rate risk); the risk that the investor will be unable to reinvest interest or principal at expected interest rates (reinvestment risk, or prepayment risk on callable bonds); and the risk that inflation will rise, reducing the purchasing power of future investment income (purchasing power risk). There is also the risk of future changes in income tax rates (taxation risk). In addition, investors demand a premium to compensate them for the costs they may incur in reselling and for uncertainty about the resale prices of bonds that are illiquid (not easily convertible into cash). Borrowers may be able to reduce the interest rates that investors require by purchasing credit enhancements from third parties.

SOURCES: See "The Segmentation of Capital Markets," Appendix A in Barry P. Bosworth, Andrew S. Carron, and Elisabeth H. Rhyne, *The Economics of Federal Credit Programs* (Washington, D.C.: Brookings Institution, 1987); and Sylvan Feldstein, "Municipal Securities II: Guidelines for Investor Analysis," in Robert Kuhn, ed., *Corporate and Municipal Securities* (Homewood, Ill.: Dow Jones-Irwin, 1990), pp. 796-831.

Bearing Credit and Development Risks on Subsidized Terms

The NIC could accept lower interest rates on the subordinated infrastructure bonds that it purchased and charge lower premiums for providing development risk insurance than those that private firms would charge for bearing the same risks. Below-market interest rates and insurance premiums would convey subsidies to the municipalities and developers that the corporation assisted. In the first phase of its life, the NIC could charge subsidized rates and premiums because it would operate with government grant money provided free of charge. The corporation would be able to increase the funds that it had received from the government simply by charging prices that covered its administrative expenses and any losses resulting from borrower default or the cancellation of projects that were in the process of development.

If the NIC was established as a GSE during the second phase of its life, it could continue to charge below-market interest rates on infrastructure bonds and below-market premiums for development risk insurance, although the prices could not be as low as in the corporation's first phase. The implicit federal guarantee of the NIC's debt obligations that the GSE status conveys would reduce the interest rates that investors required on them. The NIC could pass on the savings--in the form of lower interest rates--to municipalities that issued taxable subordinated infrastructure bonds. It could also pass on savings to project developers in the form of lower premiums for development risk insurance. In effect, the government would subsidize the NIC by bearing the credit risk of its obligations, and municipalities and developers would receive a portion of the subsidies.

Increasing Federal Tax Subsidies

The two types of changes in federal tax law proposed by the commission would provide new subsidies to municipal infrastructure borrowers. The commission's proposals to modify or repeal current limitations on the use of tax-exempt bonds would enable jurisdictions to finance projects at lower interest rates. The proposal to allow part or all of the earnings attributable to investing in eligible infrastructure securities to be distributed tax-free to participants in qualified pension plans upon retirement would reduce the interest rates that issuers of such securities would have to pay. If the NIC was established as a GSE in the second phase of its life and policymakers defined its obligations as eligible infrastructure securities, the new tax break would enable the corporation to provide larger subsidies to infrastructure borrowers and project developers.

Tapping the Highly Liquid and Very Broad Market for GSE Debt

If the NIC was established as a GSE in the second phase of its life, the implicit federal guarantee of its debt obligations would make them very liquid and attractive investments for firms that ordinarily do not purchase tax-exempt municipal bonds. Pension and retirement funds, which hold few municipal bonds but invest more than a third of their assets in taxable Treasury, GSE, and corporate obligations, would shift some of those funds into debt issued by the NIC, as would other investors that invested in debt issued and guaranteed by the existing GSEs. Moreover, the corporation could issue a very large volume of debt, making its issuance costs per dollar of debt lower than those of any state or locality. The NIC could pass its low interest and issuance costs through to sponsors of infrastructure projects in the interest rates that it charged.

Enhancing the Efficiency of the Municipal Debt Market

The NIC and the IIC could also lower the issuance or interest costs paid by infrastructure borrowers by enhancing the efficiency of the municipal debt market. The corporations might be able to lower interest costs by producing information that improved the private sector's ability to price infrastructure debt; they could also reduce segmentation in the markets for some infrastructure bonds and increase competition in the bond insurance industry. Those results would enhance the allocation of resources even if the government subsidized the NIC and the IIC, provided that the benefits of the activities of the corporations exceeded the cost of the federal subsidies. Chapter II evaluates the ability of the corporations to achieve the above-noted results.

ISSUES RAISED BY THE COMMISSION'S PROPOSALS

The commission's recommendations raise two broad policy issues. The first is whether the proposals would produce an allocation of resources that would generate more benefits for society as a whole. They would improve the allocation of resources if they enhanced the functioning of the municipal credit market or if they induced states and localities to produce a preferred level and mix of infrastructure. Chapters II and III examine those possibilities.

If policymakers decided to establish the NIC and the IIC, a second broad issue would arise, namely, how the corporations would be organized. Chapter IV examines several approaches to organizing the NIC and the IIC and how those approaches would affect the following: the amount of information available about the corporations, how much control policymakers would have over the subsidies that they provided to infrastructure borrowers, and the competitive advantages that the corporations would have over private firms that participated in the municipal debt market. The analysis in Chapter IV is independent of the assessment in Chapter III of how the activities of the corporations would affect the allocation of resources.